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TWO CASES OF LIPOSARCOMA IN THE THIGH AREA

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Abstract

The liposarcoma are not rare in the thigh area. Two patients both men, 56 and 39 years of age were operated within a few months because of giant liposarcoma in the left thigh region. The liposarcoma of these patients was strikingly similar. Upon suspicion of malignancy, resection of the tumor without prior diagnostic biopsy is recommended**.** The early postoperative period of both patients passed smoothly. The full range of movement was achieved in left hip and knee joints. Operative wounds healed *per primam intentionem.* Up till now, several months after tumors removal, both patients have no data of local or distant metastases.

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Introduction

The liposarcoma involves heterogenic group of sarcomas in which cells differentiate in lipoblasts and lipocytes and according to many authors it is the most frequent sarcoma of the soft tissues. The tumor prevails in males when it is localized in the limbs and it is very rare prior to 20 years of age. Histological varieties of adipose tumors are presented in Table 1.

Table 1. Adipocytic tumors according to WHO 2013

Intermediate (locally aggressive)
Atypical lipomatous tumour / well differentiated liposarcoma
Malignant adipocytic tumors
Dedifferentiated liposarcoma
Myxoid liposarcoma
Pleomorphic liposarcoma
Liposarcoma, not otherwise specified

Well differentiated and purely myxoid liposarcomas are low-grade, while pleomorphic and dedifferentiated types are high-grade malignant tumors. Metastases are exceptional in well differentiated liposarcoma, and frequent and early in pleomorphic and dediferentiated type (1). The dedifferentiated types, metastasize to more than 50% of the cases and predominantly in the left lung. Into deep tissues of extremities, the tumor can remain undiagnosed for long time and highly differentiated forms can undergo dedifferentiation (2). Differential diagnosis between liposarcoma, lipoma, spindle and pleomorphic lipoma should be done (3). Limb sparing surgery is the recommended treatment for liposarcomas. The postoperative radio- and chemotherapy and adjuvant

chemotherapy is not justified after removal of well differentiated forms (3). The ifosfamide-based chemotherapy is recommended for pleomorphic liposarcoma and Trabectedin (ET743) – for metastatic myxoid liposarcoma.

Patients and methods

Two patients both men are presented, 56 year-old (patient I) and 39 year-old (patient II) respectively. They were admitted to our clinic with complaints of pain and a large swelling on the medial surface of the left hip. No treatment was conducted so far. The patients moved without aids and were obese. Both of them had psoriasis and gout. On physical examination, a large tumor mass in the left hip area, located medially, with a rigid texture and mild tenderness was detected, the subcutaneous vasculature of the thigh and lower leg was enlarged. Pathologically enlarged regional lymph nodes were not palpable. Affected by tumor limbs were without evidence of sensory and circulatory disorders. Except increasing of uric acid level, no other laboratory abnormalities were detected on routine checkin in both patients. MRI data showed a thick tumor formation in the medial side of the left femoral region of elongated shape, having an adipose tissue component corresponding to a greater degree of liposarcoma (Fig. 1). On abdominal ultrasound fatty liver was found.

The direct excisional biopsy was the choise of treatment because of high risk of malignancy and metastasing. The tumor was removed along with *m. gracilis*, which was intimately involved in its capsule (Fig. 2).

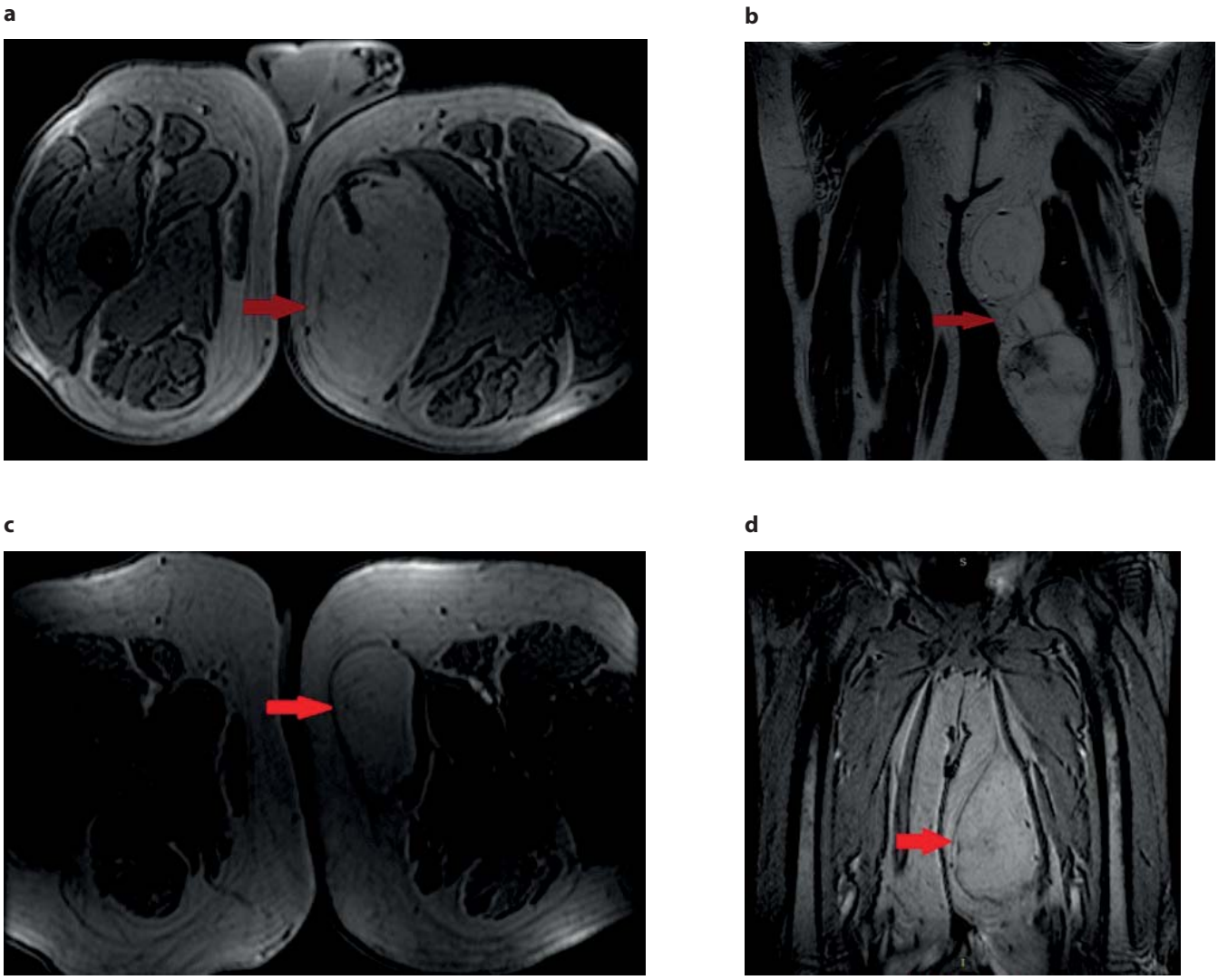


Figure 1. Diagnostic MRI – large tumor formation in the medial side of the left thigh region, corresponding to liposarcoma (arrows); (**a, b**) – patient I, (**c, d**) – patient II.

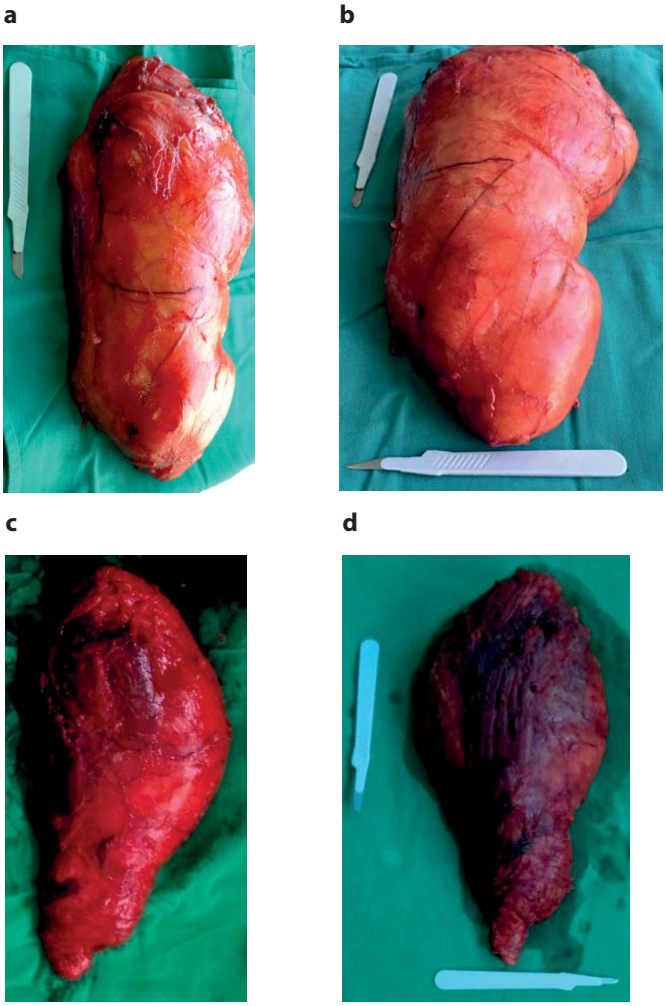


Figure 2. The removed tumors „twins" – macroscopic appearance of tumors excised *en bloc* and with almost entire *m. gracilis*. (**a, b**) - patient I, (**c, d**) - patient II.

Results

Although both patients showed a striking similarity of localization of the tumor, its macroscopic form and accompanying diseases, the histological characteristics of these „twins" of malignant tumors was different. Histological findings in patient I (Fig. 3) revealed sclerotic variant of well-differentiated liposarcoma with pronounced polymorphism. Irregular and different in size lobules surrounded by connective tissue are presented (Fig. 3a). Tumor cells are different in shape and circumferentially spaced cores that show no pronounced polymorphism. The vessels are thickened with eccentric walls. Fibrotic fields of hyalinization, hyperemic and dilatated blood vessels of venous type, and presence of siderophages in the vessel wall, lumen and interstitial tissue are presented (Fig. 3b). The various in size and shape tumor cells with a field of fat necrosis and collections siderophages, a remnant of old bleeding and evidence of good blood supply to the tumor are presented (Fig. 3c).

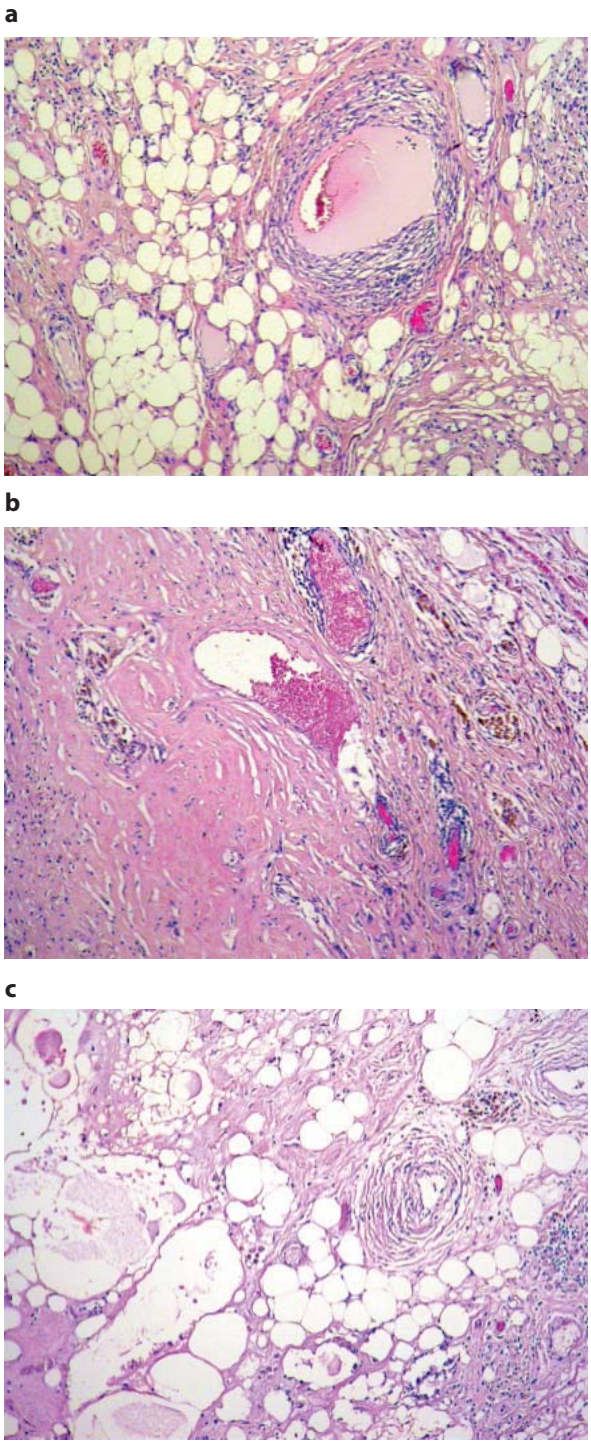
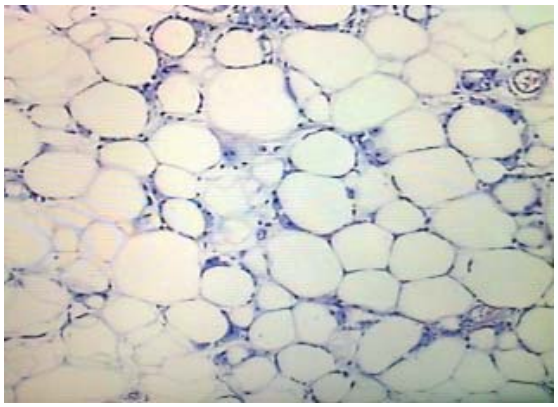


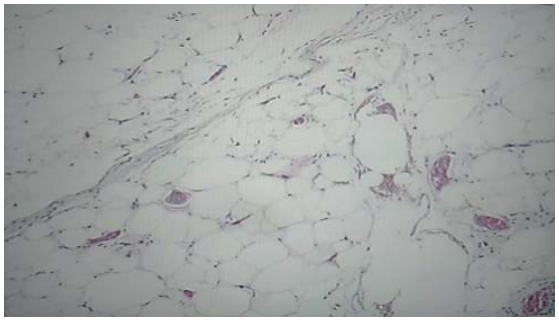
Figure 3. Micrographs showing histological findings in patient I.

Histological findings in patient II (Fig. 4) revealed atypical lipomatous tumor (low-grade highly differentiated liposarcoma) without necrotic fields, hemorrhages and local tumor invasion. Cells similar to mature adipocytes with enlarged hyperchromatic and peripherally located nuclei are presented (Fig. 4a). Zonal neovascularization around adipocytes with smaller dimensions, single lipoblasts and small in size myxoid regions can be seen in Figure 5b and areas containing smooth muscle fibers are visible in Figure 4c.

a



b



c

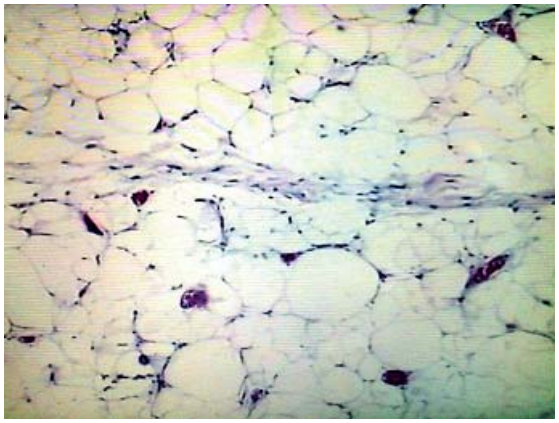


Figure 4. Micrographs showing histological findings in patient II.

The postoperative course of both patients proceeded relatively smoothly. Complications included seroma formation in the distal part of the thigh area that was drained by small incision. A kinesitherapeutic program was appointed to prevent the development of contractures of the hip and knee joints. The early postoperative period of both patients passed smoothly. The full range of movement was achieved in left hip and knee joints. Operative wounds healed *per primam intentionem.* Utill now, several months after tumors removal, both patients have no data of local or distant metastases.

Discussion

The presented two patients are strikingly similar, both in type and location of liposarcoma and in the accompanying diseases as gout, psoriasis or obesity. Their limited number does not allow to draw definitive conclusions and of course it is possible to be only a coincidence. Upon suspicion of malignancy, wide (radical) resection without prior diagnostic biopsy is recommended, because of the high risk of tumor spreading due to disruption of the capsule.

Conclusion

The deep-lying liposarcomas are not rare in the thigh area. The differential diagnosis should not exclude the presence of liposarcoma in men with atypical local symptoms and accompanying diseases. The early diagnosis and adequate removal of the tumor can prevent amputation or limb disarticulation and save the patient‘s life.

Conflict of interest statement

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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